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10/822,185	04/09/2004	Richard Eric Lander	MSFT-2950/307196.01	1793
41505 7590 04/02/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER HILLERY, NATHAN	
			ART UNIT 2176	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/822,185	Applicant(s) LANDER, RICHARD ERIC	
	Examiner Nathan Hillery	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12-21 and 23-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,12-21 and 23-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Amendment filed on 1/3/07.
2. Claims 1 – 36 are pending in the case. Claims 1, 13, 23 and 31 are independent.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 23 – 36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
5. Claims 23 – 36 have no practical application of a judicial exception as claimed because there is neither a physical transformation nor a production of a concrete, useful and tangible result.

Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for validating a document. This produced result remains in the abstract and, thus, fails to achieve the required status of having real world value.

The claims appear to be in the preliminary stages and fall short of the disclosed practical utility. In other words, the claims fail to fulfill and/or reflect the specific, substantial, and credible utility sought by the disclosed invention, and thus do not produce a useful result.

Consequently, claims 23 – 36 are nonstatutory. The claims simply recite a data structure with instructions for validating without producing a concrete, useful, and tangible result.

6. Further, to expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 above are further rejected as set forth below in anticipation of applicant amending these claims to make them statutory.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1 – 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, there is no support for storing a glossary document, a frequently asked questions document nor a reference document on a computer readable medium as recited in claim 1, lines 19 and 20 and in claim 13, lines 15 and 16.

Claims 2 – 12 and 14 – 22 are rejected for fully incorporating the deficiencies of the base claim(s) from which they depend.

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9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 31 – 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language.

This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 13 – 21 and 31 – 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Vlist (XML Schema) published June 2002 (p 12).

13. **Regarding independent claim 13**, Vlist teaches that a separate schema can be made for simple type definitions (p1, last paragraph), which meet the limitation of **declaring a first group of properties in at least one first schema**, since simple-types.xsd is equivalent to the claimed first schema.

Vlist teaches that a separate schema can be made for complex type definitions (p 2, second block paragraph), which meet the limitation of **declaring at least one intermediate group of properties in at least one second schema, wherein each of said at least one intermediate group of properties do not depend on any properties other than those declared in itself, those declared in the first group of**

properties, and those declared in intermediate groups of properties between itself and said first group of properties, since complex-types.xsd is equivalent to the claimed second schema.

Vlist teaches that the main schema includes simple-types.xsd and complex-types.xsd (p 2, third paragraph block), which meet the limitation of **generating at least one schema with properties that depend on some or all of the properties in said first group of properties and said at least one intermediate group of properties**, since main.xsd inherits the properties of the two included schemas – schema inclusion is a logical inclusion (p 1, first block under 8.1).

Vlist teaches that the main schema defines information relating to a book (p 10, bottom), which meet the limitation of **wherein a schema resulting from said generating at least one schema defines a complete document structure for one or more of a glossary document, a frequently asked questions document, and a reference document**;

Vlist teaches that like any storage system, a XML document needs to provide ways to identify and reference pieces of the information it contains (p 13, first paragraph), which meet the limitation of **storing said one or more of a glossary document, a frequently asked questions document, and a reference document on a computer readable medium**.

14. **Regarding dependent claim 14**, Vlist teaches that redefinitions are implemented using the xs:redefine element with a schemaLocation attribute (like

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xs:include). Its children are component definitions that replace the definition found in the included schema. The definitions that are not included in the xs:redefine element are kept unchanged (p 3, first block), which meet the limitation of **inserting additional properties into one or more of the first group of properties, the at least one intermediate group of properties, and at least one schema that results from said generating.**

Vlist teaches that W3C XML Schema contains a feature that allows derivation of global types and group definitions during an inclusion; it keeps the same name after the derivation. Thus, the semantic of these redefinitions is "take this definition instead of the one you've found in the included schema, but make sure that it's a valid derivation so that applications are not too surprised about the change." (p 3, third block paragraph), which meet the limitation of **determining if said additional properties are common to more than one of the at least one schema that results from said generating at least one schema.**

Vlist teaches that are implemented using the xs:redefine element with a schemaLocation attribute (like xs:include). Its children are component definitions that replace the definition found in the included schema. The definitions that are not included in the xs:redefine element are kept unchanged, which means that a xs:redefine with no child element is strictly equivalent to xs:include (p 3, first block), which meet the limitation of **inserting any additional properties that are common into one or more of said first group of properties and said at least one intermediate group of**

properties; and inserting any additional properties that are not common into the at least one schema that results from said generating at least one schema.

15. **Regarding dependent claim 15**, Vlist teaches that the simple-type schema (simple-type.xsd) defines strings – string255 and string32 (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares a basic text type for identifying text.**

16. **Regarding dependent claim 16**, Vlist teaches that the simple-type schema (simple-type.xsd) defines bookID to have a specific format (pattern value) and will truncate any extra data and replace it with just that data that fits the format or pattern specified (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for identifying data that will be replaced and corresponding data that the identified data will be replaced with.**

17. **Regarding dependent claim 17**, Vlist teaches that the simple-type schema (simple-type.xsd) defines bookID to have a specific format (pattern value) and will truncate any extra data and replace it with just that data that fits the format or pattern specified (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for marking data**

proximal to the identified data that will also be replaced with the corresponding data.

18. **Regarding dependent claim 18**, Vlist teaches that the simple-type schema (simple-type.xsd) defines strings – string255 and string32 (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for identifying data that can be referenced in multiple locations of a document instance, thereby supporting easy updating of the data.**

19. **Regarding dependent claim 19**, Vlist teaches that the simple-type schema (simple-type.xsd) defines a date element for identifying dates (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties or in the at least one intermediate group of properties declares one or more of an acronym element for identifying acronyms, an abbreviation element for identifying abbreviations, a quotation element for identifying quotations, a date element for identifying dates, a foreign phrase element for identifying foreign phrases, a conditional element for marking data to be conditionally included, a subscript element for identifying subscripts, and a superscript element for identifying superscripts.**

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20. **Regarding dependent claim 20**, Vlist teaches that the complex-type schema (complex-type.xsd) defines a title for identifying the title of a book (p 2, middle, complex-type.xsd code), which meet the limitation of **at least one property in the first group of properties or in the at least one intermediate group of properties** declares one or more of a paragraph element for identifying paragraphs and **a title element for identifying titles**.

21. **Regarding dependent claim 21**, Vlist teaches that we now have an included schema (complex-types.xsd), which references elements (such as author, character, or dead), that are defined in the main schema using datatypes defined in either simple-types.xsd or complex-types.xsd (p 2, last block), which meet the limitation of **one or more of the at least one first schema and the at least one second schema comprises a plurality of schemas, and wherein at least one schema in said plurality of schemas refers some or all of the other schemas in said plurality of schemas**.

22. **Regarding claims 31 – 36**, the claims incorporate substantially similar subject matter as claims 13 – 21 and are rejected along the same rationale.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 1 – 10, 12, 23 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vlist (XML Schema) published June 2002 (p 12).

25. **Regarding independent claim 1**, Vlist teaches that a separate schema can be made for simple type definitions (p1, last paragraph), which meet the limitation of **producing a plurality of schemas declaring a plurality of properties, said plurality of schemas comprising: a first group of at least one schema within said plurality of schemas in a base layer**, since simple-types.xsd is equivalent to the claimed first group;

Vlist teaches that a separate schema can be made for complex type definitions (p 2, second block paragraph), which meet the limitation of **a second group of at least one schema within said plurality of schemas in an intermediate layer**, since complex-types.xsd is equivalent to the claimed second group; and

Vlist teaches that the main schema defines information relating to a book (p 10, bottom), which meet the limitation of **two or more top layer schemas that each provide a complete document structure for a glossary document, a frequently asked questions document, or a reference document**;

Vlist teaches that we now have an included schema (complex-types.xsd), which uses datatypes defined in either simple-types.xsd or complex-types.xsd (p 2, last paragraph), which meet the limitation of **wherein any properties declared within said**

second group that are dependent on schemas outside said second group are dependent on properties declared within said base layer; and

Vlist teaches that the main schema includes simple-types.xsd and complex-types.xsd (p 2, third paragraph block), which meet the limitation of **at least one property declared within each of said two or more top layer schemas is dependent on a property declared in said first group or in said second group**, since main.xsd inherits the properties of the two included schemas – schema inclusion is a logical inclusion (p 1, first block under 8.1); and

Vlist teaches that like any storage system, a XML document needs to provide ways to identify and reference pieces of the information it contains (p 13, first paragraph), which meet the limitation of **storing a glossary document, a frequently asked questions document, or a reference document conforming to said plurality of schemas on a computer readable medium; and**

Vlist teaches that validation is the most common use for schemas in the XML world. By validating documents against schemas, you can ensure that the documents' contents conform to your expected set of rules, simplifying the code needed to process them (p 15, 1.1.1. Validation), which meet the limitation of **validating that said glossary document, frequently asked questions document, or reference document conforms to said plurality of schemas.**

Vlist does not explicitly teach two or more top layer schemas. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to appreciate that because Vlist teaches that one can include just the simple-types.xsd into

a main schema (p 2, lines 1 and 2) and then later teaches including both the simple-types.xsd and the complex-types.xsd (p 2, bottom), the skilled artisan would be well aware of the ability to save to separate “main schemas” – one with just simple types and another with both simple and complex types. The skilled artisan would have been motivated to do so in order to be able to have a schema structure that is exclusively simple and another that is inclusively simple yet complex.

26. **Regarding dependent claim 2**, Vlist teaches that the simple-type schema (simple-type.xsd) defines strings – string255 and string32 (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares a basic text type for identifying text**.

27. **Regarding dependent claim 3**, Vlist teaches that the simple-type schema (simple-type.xsd) defines bookID to have a specific format (pattern value) and will truncate any extra data and replace it with just that data that fits the format or pattern specified (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for identifying data that will be replaced and corresponding data that the identified data will be replaced with**.

28. **Regarding dependent claim 4**, Vlist teaches that the simple-type schema (simple-type.xsd) defines bookID to have a specific format (pattern value) and will

truncate any extra data and replace it with just that data that fits the format or pattern specified (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for marking data proximal to the identified data that will also be replaced with the corresponding data.**

29. **Regarding dependent claim 5**, Vlist teaches that the simple-type schema (simple-type.xsd) defines strings – string255 and string32 (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties declares an attribute for identifying data that can be referenced in multiple locations of a document instance, thereby supporting easy updating of the data.**

30. **Regarding dependent claim 6**, Vlist teaches that the simple-type schema (simple-type.xsd) defines a date element for identifying dates (p 1, bottom, simple-type.xsd code), which meet the limitation of **at least one property in the first group of properties or in the at least one intermediate group of properties declares one or more of an acronym element for identifying acronyms, an abbreviation element for identifying abbreviations, a quotation element for identifying quotations, a date element for identifying dates, a foreign phrase element for identifying foreign phrases, a conditional element for marking data to be conditionally included, a**

subscript element for identifying subscripts, and a superscript element for identifying superscripts.

31. **Regarding dependent claim 7**, Vlist teaches that the complex-type schema (complex-type.xsd) defines a title for identifying the title of a book (p 2, middle, complex-type.xsd code), which meet the limitation of **at least one property in the first group of properties or in the at least one intermediate group of properties declares one or more of a paragraph element for identifying paragraphs and a title element for identifying titles.**

32. **Regarding dependent claim 8**, Vlist teaches that the idea of automating these through "binding" the information available in XML documents directly into the structures of applications (generally as objects or RDBMS tables) is probably as old as markup (p 16, 1.1.4. Data Binding), which meet the limitation of **wherein said first group of at least one schema or said second group of at least one schema declares one or more of a table element for identifying tables, an entry element for identifying table entries, a list element for identifying lists, a procedure element for identifying a procedure, and a step element for identifying a step in a procedure.**

33. **Regarding dependent claim 9**, Vlist illustrates a bookTmp and a personType section in complex-types.xsd (p 2 middle of page), which meet the limitation of **wherein**

said first group of at least one schema or said second group of at least one schema declares a section element for identifying sections of a document.

34. **Regarding dependent claim 10**, Vlist teaches that we now have an included schema (complex-types.xsd), which references elements (such as author, character, or dead), that are defined in the main schema using datatypes defined in either simple-types.xsd or complex-types.xsd (p 2, last block), which meet the limitation of **wherein said first group of at least one schema or said second group of at least one schema comprises three or more schemas, and wherein at least one schema of said three or more schemas incorporates some or all of the other schemas of said three or more schemas.**

Vlist does not explicitly teach three or more schemas. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to appreciate that because Vlist teaches that one can include one or two schemas, the skilled artisan would be well aware of the ability to save three or more schemas as discussed in pp 3 – 6 (complex-types2.xsd, author.xsd, etc.). The skilled artisan would have been motivated to do so in order to be able to have a schema structure that incorporate many small schemas in order to reduce the size of each schema document.

35. **Regarding claims 12 and 23 – 30**, the claims incorporate substantially similar subject matter as claims 1 – 10 and are rejected along the same rationale.

Response to Arguments

36. Applicant's arguments filed 1/3/07 have been fully considered but they are not persuasive.

37. Applicant argues date of reference, Vlist (p 11, fourth paragraph).

The Office disagrees.

The Office has provided proof via p 12 of the cited Vlist reference, which clearly shows a publication date of June 2002. Thus, the reference qualifies as prior art under 35 USC 102(b).

38. Applicant argues that Vlist fails to teach **declaring at least one intermediate group of properties in at least one second schema, wherein each of said at least one intermediate group of properties do not depend on any properties other than those declared in itself, those declared in the first group of properties, and those declared in intermediate groups of properties between itself and said first group of properties** because Vlist teaches that complex-type.xsd references elements that are defined in the main schema (p 11, bottom – p 12, top).

The Office disagrees.

First, it should be noted that applicant is not fully appreciating the reference as cited. Vlist teaches that complex-types.xsd references elements that are defined in the main schema. Vlist also teaches that the elements defined in main schema use (or depend) on datatypes defined in either simple-types.xsd or complex-types.xsd. In contradistinction, the claim merely requires that the properties of "complex-types.xsd"

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do not depend on any properties except those declared in it or a lower layer of it. The purpose of complex-types.xsd is to define datatypes. None of the datatypes defined in complex-type.xsd depend on any properties defined in main schema. However, the properties defined in main schema depend on the properties (data types) defined in either simple-types.xsd or complex-types.xsd.

Conclusion

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Hillery whose telephone number is (571) 272-4091. The examiner can normally be reached on M - F, 10:30 a.m. - 7:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NH


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